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Important Pressure Washing Information

The information about **pressure washing** contained in this section of the *Massachusetts Clean Marina Guide* (page 4-4) is not correct. CZM is developing new pressure washing guidance.

For more information about pressure washing practices, go to CZM's Pressure Washing Information page at http://www.mass.gov/czm/marinas/pressurewashing/index.htm or contact CZM's Clean Marina Program Coordinator Steve McKenna by e-mail at stephen.mckenna@state.ma.us or call 508-362-1760.

Boat bottoms should be maintained in desingated areas away from the water.

4.1 Hull Maintenance and Cleaning

If not properly controlled, hull maintenance activities, including scraping, sanding, pressure washing, and painting, can put toxic pollutants into the marine environment. Where marinas do not provide these services, Do-It-Yourselfers and outside contractors may be performing this work on the marina's property. In all cases, this section provides you with tools to reduce the potential negative impacts from hull maintenance.

LEGAL REQUIREMENTS

The following laws apply to hull maintenance activities. If you perform hull maintenance services at your facility, please read the summary of these regulatory programs in Chapter 6.

- National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP) for Industrial Activities
- Organotin Anti-Foulant Law
- Massachusetts Air Quality Program
- Massachusetts Hazardous Waste Regulations
- Massachusetts Waterways Regulations

Please Note

Most marinas that provide commercial boat maintenance services where maintenance activities are exposed to the weather must hold a National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP) from the US Environmental Protection Agency (EPA). See Chapter 6 for a description of the program and the requirements for complying or call the USEPA NPDES Program at (617) 318-1615.

Best Management Practices

Hull Scraping, Sanding, and Washing

Hull scraping, sanding, and washing releases pollutants that are bound up in hull paint and exposes marine organisms to those pollutants. Employing the following BMPs will minimize the potential for pollutants associated with hull paint to reach coastal waters.

- **Designated Maintenance Areas:** Restrict all major vessel repair and maintenance work to designated work areas that are located away from the shoreline. Activities that should be restricted to designated areas include abrasive blasting and pressure washing, hull scraping and sanding, and hull painting. Maintenance work such as painting, scraping, and hull cleaning should be done on land, not at marina slips or moorings. Underwater cleaning of hulls should be prohibited. The area should be provided with containment as outlined below.

- **Containment:** Maintenance areas should be designed and equipped to minimize the spread of pollutants by either trapping or filtering runoff. Berms or curbs made of concrete or asphalt can be used to enclose the area and prevent runoff from leaving the maintenance site. To prevent pollutants from seeping into the subsoils, all maintenance areas should be located on top of a hard, impermeable surfaces, such as blacktop. Maintenance areas must be covered to prevent rainwater from washing

away the remnant pollution left over after work, or alternatively, the work area must drain to an oil/water separator for treatment.

- **Filter Pressure Washwater:** Use a pressure washwater filtering system that works for your marina. Any system should include a designated paved pressure washing area that is upland and as far from the water as possible. Washwater must also be collected, settled, and filtered if it is to be discharged to the ocean. At a minimum, 80 percent of the visible solids must be removed. Once washwater is treated, it can be discharged to marine waters or collected in a cistern to be used for watering the marina grounds. Discuss options for disposing of the collected solids with your waste hauler. Treatment options include:

  Overland filtration: Slope the paved wash surface to make the water go through temporary filters (such as fabric filter cloth, hay bales, screens and air conditioner filters), or more permanent filters (including vegetated buffer areas like grass, and/or sand).

  Settling: Direct washwater to a container trap designed to settle out solids. The trap must be periodically cleaned out and the sediments must be dried before going to the landfill.

  Filtration: Strain runoff through filter cloth to capture smaller particles that do not readily settle out. A combination of a trap and filter is superior because traps usually collect larger particles, while the use of a filter alone requires more regular maintenance.

  Treatment: An oil/water separator can be added where engine work will be done or oily bilges emptied. Other more expensive techniques exist, including swirl technologies and chemical filters, and are available from private companies. However, since pressure washing is a seasonal service provided mostly during the fall haul-out season, marinas should avoid overly complex treatment systems or those that can be damaged by freezing. See Section 4.12 for more information on the types of treatment systems available.

- **Work Indoors:** Where practical, conduct vessel maintenance indoors or under temporarily covered areas where the rain cannot cause runoff. Sheet plastic shelters are widely used by many marinas.

- **Work Away from the Water:** At a minimum, always move each boat inland to the approved work area before scraping or power washing the hull. Do not allow anyone to do bottom cleaning on the launch ramp area or in the lift well.

- **No In-Water Bottom Cleaning:** Removal of seaweed and other marine growth on the bottom of boat hulls by divers must be prohibited. This practice is sometime carried out by owners of sail boats before races in regattas to enhance boat speed. Cleaning of seaweed also removes anti-foulant paint and associated pollutants.

Hazard Alert

Paint chips that are collected must be disposed of as hazardous waste if the paint is toxic. See Section 4.10 for more information on Hazardous Waste Management.

Please Note

EPA regulates the discharge of pressure washwater under the NPDES Permit Program. If you discharge any untreated washwater to marine waters, you are required to obtain a NPDES Individual Permit.

Consider This

A dust free sander reduces unhealthy dust by as much as 98 percent, which makes for a healthier work area and cleaner natural environment. The dust free sanders are cost efficient as well. A report written by Martin Walter Co, Inc., indicated that a marina manager in Missouri increased productivity by cutting sanding time by 30 percent, decreasing cleanup labor by 80 percent and providing rental profit through weekend rentals to customers.

- **Dustless Vacuum Sanders:** Dustless sanders use industrial vacuum cleaners to trap dust created in the sanding process before it becomes airborne. As the sander removes paint, dust is drawn into several holes located through the sanding pad. The dust is then sucked into a vacuum container that can be emptied for disposal. Dustless vacuum sanders are one of the best ways to control paint dust before it can become a pollutant. Added advantages include keeping a clean workplace, reducing health risks to workers, and reducing clean-up costs and time. If you choose dustless sanders as a BMP, require all staff, outside vendors, and Do-It-Yourselfers to always use this equipment. Train staff to use equipment and develop a user manual for Do-It-Yourselfers. See Appendix C for vendors of dustless sanders.

LOCAL EXAMPLE

Parker's Boatyard in Cataumet, uses vacuum sanders because they are cost effective, cleaner, and more efficient than old sanding methods. Parker does not allow people to do their own bottom work at the boatyard for both environmental and economic reasons. Other yards, such as Manchester Marine, encourage Do-It-Yourselfers and rent vacuum sanders to them. The rental operation has allowed Manchester Marine to pay off the cost of the sanders and make a small profit. Call Bruce Parker, Parker's Boatyard at (508) 563-9366 or Rob Hoyle, Manchester Marine at (978) 526-7911 to find out how vacuum sanders have worked at their marinas.

- **Tarps and Filter Cloth:** Use tarps and/or filter cloth to catch scrapings and other debris produced during maintenance work. Tarps and cloth are inexpensive "low-tech" methods to collect debris before it can be washed into coastal waters. Filter cloths are better than tarps when boat work is expected to last longer than one day, because should it rain, the water passes through the cloth instead of washing the debris off the tarp. Have these items available to rent or sell to customers who do their own boat maintenance.

LOCAL EXAMPLE

Ryder's Cove Marina uses filter cloth as a convenient way to contain pollutants produced through boat maintenance. Filter cloths that collect debris are placed under a boat during pressure washing and chipping that collect debris. The pad can be shaken out and chips disposed of off-site. Then the pad can be reused for approximately a week. Call Ryder's Cove Marina at (508) 945-1064 for more information.

- **Clean Up Designated Areas:** Clean up the designated work area after scraping and painting. Leaving areas cluttered and messy will cause spills and allow pollutants to be tracked outside the work area.

Painting

Because hull paints contain toxic pollutants, they should be used with care. Consider the following BMPs when painting your boat.

- **Designated Maintenance Areas:** Restrict mixing of paints, solvents, and reducers, as well as the painting itself, to designated areas that are located on a hard surface and isolated from the weather.
- **Prohibit Spray Painting on the Water:** Sprayed paint can be difficult to control. Paint can be inadvertently sprayed into the water and expose marine life to toxic chemicals.
- **Clean Up Paint and Supplies:** Treat paint spills like oil spills. Clean up immediately with absorbent materials, paper, and/or rags. Since liquid paints are classified as hazardous material, dispose of paint brushes and paint properly (see Section 4.10). If your customers are permitted to paint their own boats, require them to clean up after themselves. Provide paint disposal areas for customers to use. Before disposal, all paint cans and worn out brushes and rollers should be allowed to air dry.
- **Appropriate Use and Storage of Hazardous Materials and Waste:** Make certain that all painting materials are used strictly according to manufacturers' instructions. Consult the Material Safety Data Sheets and Massachusetts hazardous waste regulations for proper handling of the products and disposal of unused materials. Refer to Section 4.10 for more information about hazardous waste disposal. Keep covers and caps on paints, thinners, and solvents to minimize the release of VOCs. Outside contractors working in your marina must, under terms of your contract with them, comply to the same BMP and cleanup standards as adopted by your business.
- **Spray Booths:** A spray booth is a permanent shed or temporary enclosure that can be erected around a boat during painting. Spray booths confine overspray and prevent drifting onto other boats, land, or water. Those booths equipped with air filters reduce impacts on air quality by filtering paint dust and particulates out of the air. In addition, filters help protect workers by drawing harmful fumes and paint overspray away from employees.
- **High Volume, Low Pressure (HVLP) Spray Guns:** HVLP spray guns are the most efficient means for applying paint. Promote use of spray guns that are rated at 65 percent efficient paint transfer or greater. These spray guns direct more paint onto the intended surface and, as a result, less paint gets into the air, and less volatile organic compounds (VOCs) are released. In addition, HVLPs save money because less paint is used and clean up costs are reduced. Electrostatic spraying is another option for applying paint so that more paint stays on the boat bottom. See Appendix C for companies that sell innovative paint applicators.
- **Traditional Paint Applications:** Use brushes and rollers where possible. Some spray guns can physically agitate the paint during application, which releases more of the chemical compounds into the air. Traditional applications reduce air emissions.

Please Note

Spray booths may require a permit from the Massachusetts Department of Environmental Protection Air Quality Program.

- **Water-Based Paints:** Use water-based paints wherever possible. Water-based paints are environmentally-preferable because they use small amounts of VOC solvents. Performance can be just as good as oil-based paints and cleanup is easier because brushes, rollers, and equipment can be cleaned in water, making paint thinners unnecessary.

- **Inform Do-It-Yourselfers:** Provide information to your customers who work on their boats at the marina about potential harm to marine waters caused by uncontrolled release of paint products. Visible signs, clauses in customer contracts, fact sheets, and tips in mailings are all good ways to communicate this information. A Boater Fact Sheet on Hull Maintenance Activities is provided for your use in the pocket of the inside back cover of this guide. Photocopy it and distribute it to your customers. For more general information about communicating clean boating practices to your customers, see Chapter 3.

- **Train Employees:** Train your employees to be on the lookout for hull maintenance activities by Do-It-Yourselfers that may be harmful to the coastal environment.

Useful Contacts

1. US Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Program — Call **(617) 918-1615** or look on-line at **www.epa.gov/owm/sw/industry/msgp** for information about the NPDES Multi-Sector General Permit and its requirements.
2. Massachusetts Environmentally Preferable Products Procurement Program has information on acquiring recycled paints. See their website at **www.state.ma.us/osd/enviro/products.htm#building.**

HULL MAINTENANCE AND CLEANING

Complete this checklist if hull scraping, sanding, pressure washing, or painting occurs at your facility.

Activities that occur at the facility: ☐ Hull Scraping ☐ Sanding ☐ Pressure Washing ☐ Painting

Check either the "Yes" or "No" column to indicate if you are using each of the BMPs listed below. If the BMP does not apply (you are using a different BMP or the activity does not occur at your marina), put "NA" in the "Yes" column. In the "Action" box, list the next steps for all BMPs where you have checked the "No" column.

BMP	YES/NA	NO	Refer to Page	Action
*Designated Hull Maintenance Areas			4.3	
*Containment			4.3	
*Filter Pressure- Wash Water			4.4	
Work Indoors			4.4	
Work Away from the Water			4.4	
No In-Water Boat Cleaning			4.4	
Dustless Vacuum Sanders			4.5	
Tarps and Filter Cloth			4.5	
Clean Up Designated Areas			4.6	
*Designated Maintenance Areas for Painting			4.6	
*Prohibit Spray Painting on the Water			4.6	
*Clean Up Paint and Supplies			4.6	
*Use and Storage of Hazardous Material and Waste			4.6	
Spray Booths			4.6	
High Volume, Low Pressure (HVLP) Spray Guns			4.6	
Traditional Paint Applications			4.6	

BMP	YES/NA	NO	Refer to Page	Action
Water-Based Paints			4.7	
Inform Do-It-Yourselfers			4.7	
Train Employees			4.7	

***BMP will assist with regulatory compliance.**

NOTES: